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Eumeces inexpectatus: A New American Lizard of the Family Scincidae.

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AMONG collections of *Eumeces fasciatus* from the southeastern part of the United States I have noted a form resembling *E. fasciatus* and *E. laticeps* in general type of coloration, yet differing so constantly in certain details of scalation, as well as in details of color markings, that I have no hesitancy in announcing it as a species related to but entirely distinct from either of these forms.

The species occupies territory that is likewise inhabited by the typical *Eumeces fasciatus* and *Eumeces laticeps** and for this reason, doubtless, has not been hitherto recognized by herpetologists as distinct from these species.

The present known distribution extends from Pinellas county, Florida, on the western coast, through northern Florida, northern Mississippi, and east to North and South Carolina. Like most of the known species of *Eumeces*, it varies in many of its characteristics, but apparently always may be distinguished from either *E. fasciatus* or *E. laticeps* in the same locality.

Eumeces inexpectatus sp. nov.

TYPE: No. 8232 Kansas University Museum: Collected Citrus Co., Florida, by Dr. Charles Burt, Mar. 7, 1930.

DIAGNOSIS: One of the *quinquelineatus* group showing characters somewhat intermediate between *Eumeces laticeps* and *Eumeces fasciatus* as to size, number of labials, temporal scales, scale rows and markings; usually one nuchal, one postnasal and two postmentals; upper labials seven or eight, the last largest, followed by an elongate well-differentiated postlabial which reaches the ear; median preanal scales rather small; 30-32 scale rows about middle of body, sub-

* A paper is in press giving reasons for the recognition of this species.

caudal scales not distinctly enlarged; lower secondary temporal does not reach ear.

DESCRIPTION OF TYPE: The portion of the rostral visible above a little less than half the bulk of the frontoparietal; internasal large, forming a relatively short median suture, touching postnasal and loreal laterally; frontonasal much broader than long, touching the anterior loreal laterally; the sutures with the internasals somewhat shorter than those with prefrontals; latter large, broadly in contact medially, forming subequal sutures with the first supraocular and first superciliary; frontal about a fourth longer than its distance from the end of the snout; distinctly wider anteriorly than posteriorly, the sides gradually sloping, in contact with three supraoculars; frontoparietals moderate in size, forming a suture half their length; parietals very broad, not inclosing the interparietal; a pair of large nuchals; nasal divided, the posterior part forming a narrow rim about nostril; a relatively large postnasal; two loreals, the anterior very little higher than the second, which is elongated; two presuboculars; 5-4 postsuboculars; primary temporal quadrangular, nearly square; upper secondary temporal elongate, widened but little posteriorly; lower secondary nearly triangular, the longest side next to the labial; two elongate tertiary temporals following behind the secondaries; nine superciliaries, the first and last largest; three small preoculars; two small postoculars; large opaque plates on lower eyelid separated from subocular by four rows of tubercles; median upper palpebral scales form sutures with the superciliaries; eight upper labials, first with posterior part much elevated above the succeeding four, which precede the subocular; seventh distinctly smaller than eighth, which is the largest; this followed by an elongate curved postlabial which enters ear, with two small scales in contact with it above; on left side the posterior is very small; three small free lobules on anterior border of ear; six lower labials; mental with much greater extent on lip than rostral; two postmentals; chinshields typical, the last followed by two scales, the outer large, elongate, the inner small, variable, a little longer than wide; 37 scale rows behind ear; 31 rows about narrow part of neck; 40 rows about body in axillary region; 32 scale rows about middle of body; 21 rows about base of tail; lateral scales parallel save in axillary region, the laterals larger than dorsals; preanals only moderately enlarged, the three outer pairs overlapping inner; subcaudal scales not or but slightly enlarged, not or but slightly differentiated in shape from the other caudal scales; 16-17 scales under the fourth toe; the inter-

calated series of scales on outer side of fourth toe not reaching to end of second phalanx; sole with only one or two somewhat enlarged tubercles anterior to the four heel plates; head slightly bulging behind eyes; ear opening moderate; limbs well developed, the hind leg reaching elbow when adpressed; the foreleg is contained in body length 3.3 times, the hind leg 2.3; the axilla to groin distance 1.8 times and the snout to foreleg distance, 2.5 times in body length.

COLOR (in alcohol): Above generally bronze, the scales showing certain metallic reflections, many scales showing a somewhat darker area; the top of head somewhat yellowish brown; a median lighter line dimly visible bifurcating on the nuchal, the line still visible to the prefrontals; a dorsolateral line extending from supraoculars, far on to the side of the tail; the scale row immediately above showing a fine row of black dots; dorsolateral lines follow outer edges of fourth and inner third of the fifth row of scales, the rows separated, posteriorly at least, by eight scale rows; broad stripe on side of head somewhat deeper brown than top, growing gradually darker on neck, becoming almost black along side of body and tail; a lateral light line beginning on the presuboculars, forming at first a series of four more or less disconnected white spots, the last reaching the top of ear; line emerging from ear on the lower half continues above hind limb on to the tail, very strongly defined its entire length; lateral light line bordered below by a dark stripe; no sublateral light line; chin and lower labials flesh-colored; venter grayish growing bluish-gray posteriorly; a light line on the posterior side of femur; toes and feet lighter, the scales darker edged on toes.

COLOR OF FEMALE (paratype): Above very dark brown with the median light line bifurcating on nuchals continuing to rostral bordered by deep black lines, bronzy anteriorly, blue posteriorly; dorsolateral line narrow, running through middle of fifth scale row, greenish white with metallic reflections, bluish posteriorly; lateral stripe intensely black, more brownish on head; lateral light line prominent, wider anteriorly; otherwise similar to male.

VARIATION: In thirty-six specimens, on which I have complete data, the following scale variations are evident. Scales in a line from parietals to above anus, 55-59, with the following frequency: 55, three times; 56, four times; 57, twenty-one times; 58, seven times; and 59, once. Scale rows around the middle of body 30-32, with the following frequency: 30, eleven times; 31, eight times; 32, sixteen times. Upper labials 7-8, with the following frequency: 7, eighteen times; 8, eight times; 7 on one side, 8 on the other, ten

times. Postmentals invariably 2; postnasal invariably present; nuchals 1-2, one pair occurring twenty-six times; 2 pairs occurring two times; 2 on one side, 1 on the other, seven times. Invariably four supraoculars are present, three of which touch the frontal save in three cases, once on both sides of one specimen, twice on one side in two specimens. The frontal widely separated from the fronto-nasal in all but three cases. Once they were in contact; twice they were only narrowly separated. Subdigital lamellæ usually 16 to 18;

Measurements of *Eumeces inexpectatus* sp. nov.

No. Museum.....	8232 K. U. M.	8233 K. U. M.	61632 M. U. M.	61634 M. U. M.	61754 M. U. M.
Snout to vent.....	66	62	79	73	77
Snout to fore leg.....	26	22	29	28	26
Snout to ear.....	15	14	17	17.3	17.1
Tail.....	reg.	reg.	128*	131	115*
Width of head.....	12	10	15	13.6	13
Length of head.....	13.2	11.4	15.2	15	14.7
Axilla to groin.....	36	30	38	37	41
Postanal tail width.....	9	7.5	9	10	9
Fore leg	20	19	24	21.5	22
Hind leg.....	28	25	33	31	31.5

* Partly regenerated. 8232, type; 8233, paratype; 61632, Michigan U. Mus., Hillsboro, Florida; 61634, near Gulfport, Pinellas county, Florida; 61754, Cabbage Key, Florida.

the count on two feet of the same individual rarely the same. Superciliaries varied between 8 and 10, 9 being the most frequent number.

The limbs invariably overlap; in old specimens the average is about 12 mm. The small scales separating the ear from the last labial and the lower secondary temporal show some variation; occasionally only one, usually two superimposed scales, the postlabial usually the largest.

In color the variations seem to be those dependent on age, and here as in the related *laticeps* and *fasciatus* there are three general "types" of coloration: those of the young, the adult male, and the adult female.

COLORATION OF YOUNG: (From University Michigan Museum No. 61629. From near Gulfport, Pinellas Co., Fla.) General ground color deep black; a very narrow median greenish white line running to nuchals, where it is slightly separated from the two diverging lines of the head; posteriorly, on back, median line blue, becoming a

deeper blue on tail, and is finally lost in the blue ground color of the latter part of the tail; dorsolateral line not touching diverging lines of head, arises separately on the first superciliary, continues with irregular edges over outer side of the supraoculars, then continues along side of body to tail, following the fifth scale row, generally greenish-white but becoming blue posteriorly; first four labials the creamy color of the chin and lower labials; lateral white line arises on the second loreal, passing through the presuboculars and under eye, crossing the last two labials to the top of ear, where it stops; the line then begins behind ear about middle and continues back to tail; lower part of the posterior labials dark; between the median and dorsolateral lines are two dim, narrow, bronze-colored lines on the edges of the second and third scale rows, visible as far as the tail, where they become blue; belly bluish gray, which color reaches on side to the black stripe, which is below the lateral line, at which the gray is slightly lighter so as to suggest a dim sublateral light line; tail deep blue, darker posteriorly, the under side of tail a more grayish blue; chin and breast cream color; a whitish line on posterior surface of hind leg.

A second young specimen, an immature male 48 mm. (University of Michigan No. 61631 from Hillsboro Co., Fla.) already begins to show the brownish coloration on the side of the head and the labial line the tendency to form white spots on the brown color of the posterior labials; the throat shows a slight salmon brown suffusion or tinge. In general the markings are the same as in the preceding specimen.

REMARKS: While, as pointed out, this form bears much similarity to *fasciatus*, it should in no sense be construed as a subspecies of either *fasciatus* or *laticeps* since the fact that it occurs through so wide a territory occupied by these two species and maintains its identity precludes such an association.

Unfortunately I have no data on the habits of the form, nor can I state whether the species is terrestrial or arboreal. The claws are somewhat intermediate in character between those of *laticeps* and *fasciatus*. One Michigan specimen bears the label, "caught under bark of a tree."

The species may be distinguished at once from either *fasciatus* or *laticeps* by the character of the median scales under the tail; these are not or but very slightly differentiated from adjoining scale rows, while in both of the other species the median series is very distinctly widened and the scales have a different shape from the adjoining

series. Details of the color pattern are likewise different. I have added a plate of typical *Eumeces fasciatus* showing three color phases for direct comparison with *inexpectatus*. The species may likewise be compared with a series of photographs of *Eumeces laticeps* (Plates XIX and XX) appearing in this same issue of the Science Bulletin in a paper entitled, "*Eumeces laticeps*, a neglected species of skink."

Like all of the known species of *Eumeces*, variation in head scales as well as scale rows and details of the markings must be anticipated at least to the extent to which they occur in any other species of *Eumeces* closely related or not. Many of the variations in the material examined have been pointed out, and other variations doubtless occur.

The material I have examined has not been exhaustive. Thanks to the courtesy of the authorities of the Michigan University Museum, and particularly Mrs. Helen T. Gaige, I have had the privilege of examining their extensive collection, which contains twenty-nine specimens of this new form from the following localities:

Nos. 65186, near Rock Hill, S. C.; 55058, Neuse river, New Bern, N. C.

Nos. 53693, 53694, 53698, 53700, 53701, 53702, University of Mississippi.

Nos. 61631, 61632, Hillsboro county, Florida; 56165, 56166, 56167, Fort Meyers, Fla.; 61629, 61634, near Gulfport, Pinellas county, Florida; 61628, near Clearwater, Pinellas county, Florida; 57717, Alachua county, Florida; 61754, Cabbage Key, Florida; 57717, 57720, Gainesville, Fla.; 61633, Long Key, Fla.; 44752, Caurey Island; 44717, 46800 (2 specimens), 52403, 52404, 52405, Chandler, Fla.

In the Kansas University Museum the following specimens are present: Nos. 776, 777, 778, 779, 780, Hillsboro county, Florida; 8232, 8233, Citrus county, Florida.

I have examined typical *Eumeces fasciatus* from many of these same localities, and *Eumeces laticeps* from practically a like number.

With the recognition of three distinct species of "five-lined" skinks in "Carolina" there arises a very nice taxonomic question as to the identity of the two Linnæan species *fasciatus* and *quinque-lineatus*, the types of which, so far as I can learn, are no longer extant. As far as the Linnæan descriptions go they might apply with equal certainty to any of the three species—*fasciatus*, *laticeps*, or *inexpectatus*. Both of the Linnæan species are from "Carolina," and the fact that most subsequent authors have regarded them as synonymous does not preclude the possibility that they refer to two

separate species, one or neither of which may be the typical widespread form which, together with Schneider's *laticeps* and the present species *inexpectatus*, has until now borne the name of *fasciatus*.

In the present state of my study of these forms I am unable to offer any solution to this puzzle.

EXPLANATION OF PLATES.

PLATE XVII.

FIG. 1. *Eumeces inexpectatus* young female. Michigan University Museum No. 61629. Gulfport, Pinellas county, Florida. Lateral view, actual size, snout to vent, 67 mm.

FIG. 2. *Eumeces inexpectatus* same specimen dorsal view.

FIG. 3. *Eumeces inexpectatus* young male. M. U. M. No. 61631. Hillsboro County, Florida. Actual size, snout to vent, 50 mm.

FIG. 4. *Eumeces inexpectatus* adult male. Type. Kansas University Museum No. 8232. Citrus county, Florida. Actual size, snout to vent, 66 mm.

FIG. 5. *Eumeces inexpectatus* adult female. Paratype. K. U. M. No. 8233. Citrus county, Florida. Actual size, snout to vent, 62 mm.

PLATE XVII.

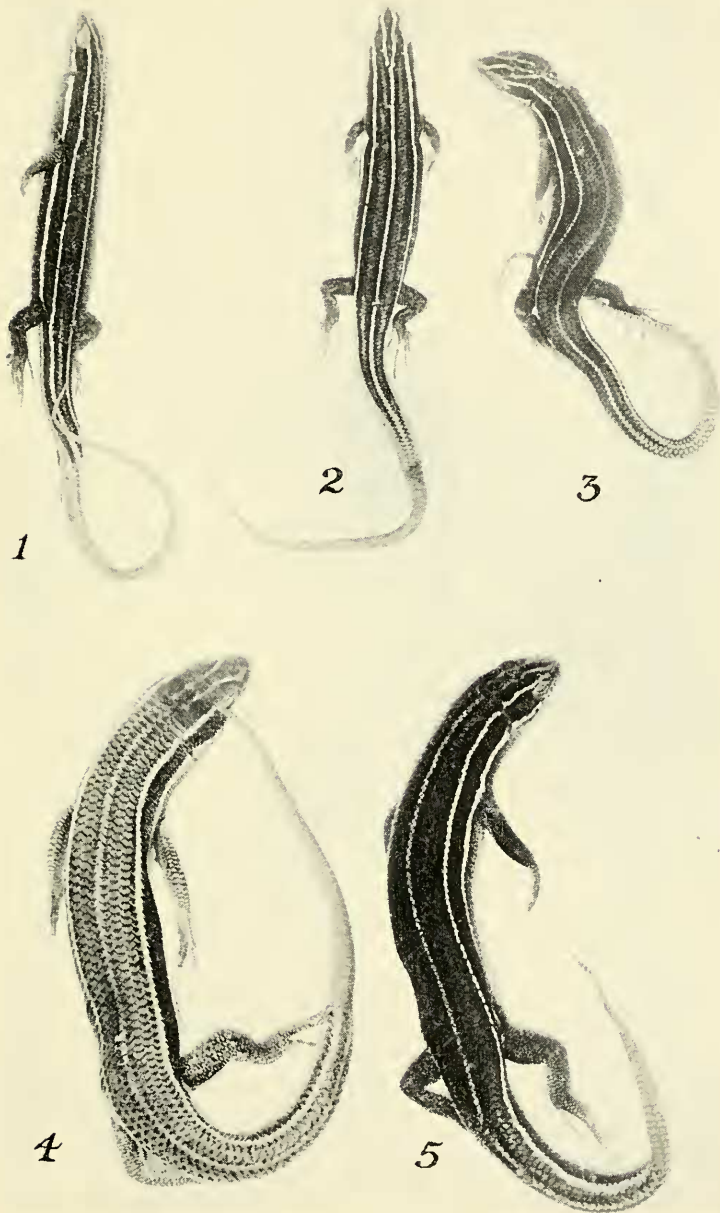


PLATE XVIII.

FIG. 1. *Eumeces fasciatus*. Adult male, old. Imboden, Ark. K. U. M. No. 11359. Size $\times 1$.

FIG. 2. *Eumeces fasciatus*. Adult male, transitional coloration. Imboden, Ark. K. U. M. No. 11355. Size $\times 1$.

FIG. 3. Adult female, typical coloration. Imboden, Ark. K. U. M. No. 11352. Size $\times 1$.

PLATE XVIII.

